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|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|------------------------------|------------------|
| APPLICATION NO.                                                                                                                                   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
| 10/830,156                                                                                                                                        | 04/22/2004  | Adrian B. Chernoff   | GP-303646                    | 8105             |
| 7590 02/23/2007<br>LAURA C. HARGITT<br>General Motors Corporation<br>Legal Staff, Mail Code 482-C23-B21<br>P.O. Box 300<br>Detroit, MI 48265-3000 |             |                      | EXAMINER<br>WILHELM, TIMOTHY |                  |
|                                                                                                                                                   |             |                      | ART UNIT                     | PAPER NUMBER     |
|                                                                                                                                                   |             |                      | 3616                         |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE                                                                                                            |             | MAIL DATE            | DELIVERY MODE                |                  |
| 3 MONTHS                                                                                                                                          |             | 02/23/2007           | PAPER                        |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                       |                                        |  |
|------------------------------|---------------------------------------|----------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/830,156  | <b>Applicant(s)</b><br>CHERNOFF ET AL. |  |
|                              | <b>Examiner</b><br>Timothy D. Wilhelm | <b>Art Unit</b><br>3616                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This Office Action is made in response to an Amendment filed 11/30/2006.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Iseki (6,439,601).

Iseki discloses a seat belt system for use by an occupant M of a vehicle seat, the seat belt system comprising seat belt webbing 11 including a solid material sufficiently configured to selectively effect a shape or dimensional change in the webbing 11 in response to an activation signal.

3. Claims 1,2 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Stonich et al (6,598,899). Stonich et al disclose a seat belt system 13 for use by an occupant of a vehicle seat 16, the seat belt system 13 comprising seat belt webbing 18 including a solid material sufficiently configured to selectively effect a shape or dimensional change in the webbing 18 in response to an activation signal, a controller 92 configured to selectively cause the generation of the activation signal to which the material is responsive, and at least one sensor 91 configured to transmit sensor signals to the controller 92, wherein the controller 92 is configured such that the size of the webbing 18 is dependent on the sensor signals, and wherein the controller 92 is

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configured to process the sensor signals to determine if at least one predetermined condition exists, and to cause the generation of the activation signal when the controller 92 determines that said at least one predetermined condition exists.

4. Claims 1-4 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by McFalls et al (US 2005/0067826). McFalls et al disclose a seat belt system 10 for use by an occupant of a vehicle seat 12, the seat belt system 10 comprising seat belt webbing 18 including a solid material sufficiently configured to selectively effect a shape or dimensional change in the webbing 18 in response to an activation signal, a controller 120 configured to selectively cause the generation of the activation signal to which the material is responsive, and at least one sensor 122 configured to transmit sensor signals to the controller 120, wherein the controller 120 is configured such that the size of the webbing 18 is dependent on the sensor signals, and wherein the controller 120 is configured to process the sensor signals to determine if at least one predetermined condition exists, and to cause the generation of the activation signal when the controller 120 determines that said at least one predetermined condition exists. With regard to claim 4, at least one sensor 116 is configured to transmit sensor signals indicative of the size of the occupant to the controller 120.

5. Claims 1,6,10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Terry et al (3,430,979). Terry et al disclose a seat belt seat for a vehicle comprising a seat belt wherein the seat belt material includes a tapered portion having a wide end and a narrow end and is in the form of a plurality of ribs spaced a distance apart from one another, and wherein the distance between each of the ribs is greater at the wide end of the tapered portion than at the narrow end of the tapered portion.

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iseki in view of Namiki (6,805,380). Iseki discloses the present invention except a tapered portion in the webbing of the seat belt. Namiki teaches a seat belt system comprising a seat belt with webbing that includes a tapered portion having a wide end and a narrow end. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki with the teaching of Namiki's tapered webbing to give more support at a desired location on the occupant.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iseki in view of Benitez, Jr. et al (3,499,681) and further in view of Flint (3,560,048). Iseki discloses the present invention except for a tapered first segment and a tapered second segment, each having a wide end and a narrow end, and further comprising a buckle connected to the narrow end of the first segment and a tongue member connected to the narrow end of the second segment. Benitez, Jr. et al teach a seat belt system comprising a seat belt including tapered first and second segments 44,46. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki to prevent severe loads on the vehicle occupant's spine and head.

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9. Flint further teaches a seat belt system comprising a seat belt 46 made up of a first and second segment including a buckle connected to an end of the first segment and a tongue member releasably engageable with the buckle and connected to an end of the second segment. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki and Benitez, Jr. et al with the teaching of Flint's buckle and tongue member to better secure the seat belt around the vehicle occupant.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iseki in view of Takaara et al (JP406025936A). Iseki discloses the present invention except for the material being a shape memory material. Takaara et al teach a seat belt that is made of a shape memory alloy. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki with the teaching of Takaara's shape memory alloy to change the shape and dimension of the webbing in a more controllable manner.

11. Claims 10,11,14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iseki, Benitez, Jr. et al, and Flint as applied to claim 7 above, and further in view of Momose (JP03067751). Iseki, Benitez, Jr. et al, and Flint disclose a seat belt system for a vehicle comprising a seat belt wherein the seat belt webbing is mounted with respect to a seatback portion of the seat so that the seat belt webbing is positionable across the occupant between the neck and the pelvis, and wherein the seat belt webbing is characterized by the absence of an over-the-shoulder portion. Iseki, Benitez, Jr. et al, and Flint disclose the present invention except for the seat belt webbing having a plurality of ribs that are selectively expendable in response to an activation signal. Momose teaches a seat belt comprising a plurality of ribs made of shape memory material that are responsive to an activation signal. Therefore, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki, Benitez, Jr., and Flint with the teaching of Momose's ribs to change the shape and dimension of the webbing in a more controllable manner.

12. Claims 10,11,14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iseki, Benitez, Jr. et al, and Flint as applied to claim 7 above, and further in view of Terry et al. Iseki, Benitez, Jr. et al, and Flint disclose the present invention except for the material being in the form of a plurality of ribs spaced a distance apart from one another, and wherein the distance between each of the ribs is greater at the wide end of the tapered portion than at the narrow end of the tapered portion. Terry et al teach a seat belt system for a vehicle 1 comprising a seat belt 9 wherein the seat belt material is in the form of a plurality of ribs 19,21,23 spaced a distance apart from one another, and wherein the distance between each of the ribs 19,21,23 is greater at the wide end of the tapered portion than at the narrow end of the tapered portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki, Benitez, Jr. et al, and Flint with the teaching of Terry et al's ribbed webbing to allow for inflation with substantially less gas or air.

13. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iseki in view of Pelrine et al (6,911,764). Iseki discloses the present invention except for a contractile polymer. Pelrine et al teach a belt made of a contractile polymer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seat belt system of Iseki with the teaching of Pelrine et al of a contractile polymer to facilitate an instant response by the seat belt to a force exerted upon it by the occupant of the vehicle seat.

*Allowable Subject Matter*

14. Claims 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

15. Applicant's arguments filed 11/30/2006 have been fully considered but they are not persuasive. Applicant argues that none of the prior art disclose seat belt webbing that includes a "solid material sufficiently configured to selectively effect a shape or dimensional change in the webbing in response to an activation." Examiner maintains his rejections citing that, in using the broadest sense of the word solid, the inflatable belts of the prior art are neither liquid nor gas and are therefore solid material that effect a shape change when the belt is inflated.

*Conclusion*

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



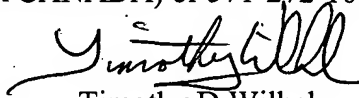
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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy D. Wilhelm whose telephone number is 571-272-6980. The examiner can normally be reached on 9:00 AM to 5:30 PM Monday through Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Timothy D Wilhelm  
Examiner  
Art Unit 3616

2/16/2007

TDW

  
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